

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/000474

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. ⁷: C07K 7/06, 7/08, 14/595; A61K 33/24; A61P 1/00, 35/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

See electronic databases consulted below

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

See electronic databases consulted below

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Registry, CA, Medline, Wpids. Sequence search and keyword search ('gastrin', 'iron?', 'ferric')

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Chemical Abstracts, Accession No. 82:125591. (B. PENKE et al.) "Peptide syntheses. LVIII. Suppression of deletion sequences by 3-nitrophthalic anhydride. Merrifield syntheses of leucine 5 - gastrin I sequence 5-12 and ACTH fragment 11-14." Justus Liebigs Annalen der Chemie, 1975; No. 12, pages 1999-2002 See abstract	24-28, 32
X	(J. PANNEQUIN et al.). "Ferric Ions are essential for the Biological Activity of the Hormone Glycine-extended Gastrin". Journal of Biological Chemistry, 2002, vol. 277, No. 50, pages 48602-48609 See whole document, in particular Figure 1.	1-5, 8, 9, 13, 18-29, 32, 34-39
X	US 4117117 (WUNSCH) 26 September 1978 See abstract, claims	24-28, 32

☒ Further documents are listed in the continuation of Box C

☒ See patent family annex

* Special categories of cited documents:

"A" Document defining the general state of the art which is not considered to be of particular relevance

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"E" Earlier application or patent but published on or after the international filing date

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"L" Document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"O" Document referring to an oral disclosure, use, exhibition or other means

"&" document member of the same patent family

"P" Document published prior to the international filing date but later than the priority date claimed

Date of the actual completion of the international search
3 June 2004

Date of mailing of the international search report
17 JUN 2004

Name and mailing address of the ISA/AU
AUSTRALIAN PATENT OFFICE
PO BOX 200, WODEN ACT 2606, AUSTRALIA
E-mail address: pct@ipaaustralia.gov.au
Facsimile No. (02) 6285 3929

Authorized officer
SWARUP CHATTERJEE
Telephone No : (02) 6283 2259

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/000474

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	(N. KNEIB-CORDONIER et al.) "Orthogonal solid-phase synthesis of human gastrin-I under mild conditions". International Journal of Peptide and Protein Research (1990), Vol. 35, No. 6, pages 527-538 See Scheme 1	24-28, 32
X	(R. A. GREGORY et al.) "Minigastrin: Corrected Structure and Synthesis". Hoppe-Seyler's Z. Physiol. Chem. (1979), Vol. 360 No. 1, pages 73-80 See abstract.	24-28, 32
X	(J. M. BOWER et al) "Trypsinogen Activation Peptide and Related Peptides as Inhibitors of Gastric Secretion". Biochemical and Biophysical Research Communications (1974) Vol. 60, No. 2, pages 820-824 See whole document, in particular page 823, Table, compound 10.	24-28, 32, 33, 39

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/000474

Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:
 - a. type of material
 - ☒ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material
 - ☒ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing
 - ☒ contained in the international application as filed
 - ☐ filed together with the international application in computer readable form
 - ☐ furnished subsequently to this Authority for the purposes of search
2. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
3. Additional comments:

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/000474

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.: 24 (in part) and 27-39 (in part)
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
The claims define a non-amidated gastrin only by the presence of one amino acid (at least glutamate residue 7). This definition is not concise enough to allow a search over the entire breadth of the claims. The embodiments of the claim that have been searched are the 9 peptides defined in claim 26.

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2004/000474

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
US	4117117	CH	636343	DE	2628006
		JP	53018563	FR	2355805
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.					
END OF ANNEX					